

## Oaks (Red and White)

*Quercus* spp.

The oaks comprise the most important group of hardwood timber in the United States, including Missouri. No other wood is more widely used. In Settergren and McDermott's *Trees of Missouri*, the authors divide the oaks into two subgroups, the white oaks and the red oaks. Missouri has seven white oak species and twelve red oak species, as well as some additional hybrids. There are notable differences between the subgroups which are important in selecting oak wood for use.

### The White Oaks:

This group has several features which distinguish it from members of the red oak group. As a rule, white oak bark is light gray or brown and is usually scaly or flaky. White oak acorns are sweet and mature in one season. The wood is also easy to recognize. Generally, the pores of white oak species are plugged with plastic-like growth structures called tyloses. Because of this, white oak wood has the unusual ability to hold liquids – a most important feature used by the tight cooperage industry. All bourbon whiskey produced in the U.S. must be aged in white oak barrels.

### The Red Oaks:

Although somewhat shorter-lived than white oaks, the red oaks have a fine reputation for beauty and versatility, and the lumber is highly sought after. Red oak acorns mature in two years and tend to be bitter in taste. The bark is generally dark gray or brown, occasionally black. It is usually rough, hard and ridged, rather than light gray, scaly or flaky as in the white oaks. The pores of red oak are generally clear of tylosis, making the wood unusable for tight cooperage. Red oak is most important to the furniture, flooring, railroad tie and pallet businesses. See Table 2 for some important distinctions between white oak and red oak.

Table 2. Distinguishing Feature of White and Red Oaks<sup>1</sup>

#### White Oak

1. Acorns mature in one season
2. Leaflobes rounded
3. Color of heartwood tends to be tan or brownish
4. Heartwood pores have abundant tyloses
5. Fresh cut wood has a distinct but not unpleasant odor.
6. Summerwood pores are small and numerous. Cannot be counted with a hand lens.
7. Annual rings usually are compact, resulting in a finer textured wood.
8. Heartwood is quite durable.

#### Red Oak

1. Acorns mature in 2 years.
2. Leaflobes bristle-tipped.
3. Color of heartwood tends to be reddish
4. Heartwood pores have few tyloses.
5. Fresh cut wood has a sour, often unpleasant odor.
6. Summerwood pores are few. Can be counted with a hand lens.
7. Annual rings usually are widely separated, resulting in a coarse texture.
8. Heartwood is not particularly durable.

<sup>1</sup> *Beautiful Woods*, the Frank Paxton Lumber Co., Kansas City, Missouri, 1974.